



Cellular protease and protease inhibitors that regulate infection of influenza virus and Sendai virus

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Infectious cell tropism of influenza and Sendai viruses are strictly regulated by host cellular factors. One of the principal factor is tryptase Clara secreted from the bronchial Clara cells. These viruses express membrane fusion activity and infectivity after cleavage of viral envelope membrane fusion protein by tryptase Clara. On the other hand, defensive compounds of the virus infection, such as pulmonary surfactant and mucus protease inhibitor, are also secreted in the airway. Balance in the amount between tryptase Clara and these defensive compounds may determine the susceptibility of influenza virus infection.